

CLAIMS:

1. (Currently Amended): An apparatus for performing commands, comprising:

performance logic, wherein the performance logic is configured to perform a plurality of commands issued by a processor, and wherein the performance logic further comprises a command queue having a queue depth equal to a predefined number of slots for storing the plurality of commands issued by the processor;

a command pipeline, wherein the command pipeline communicates the plurality of commands issued by the processor to the performance logic;

a plurality of counters, wherein a known counter within the plurality of counters represents a count of a number of commands in the command pipeline and in the command queue, and wherein an unknown counter within the plurality of counters represents a predicted count of future commands that can be directed toward the command queue and are past a point where the future commands can be stalled; and

stall logic, wherein the stall logic stalls performance of the plurality of commands issued by the processor responsive to a sum of the known counter and the unknown counter being greater than the queue depth.

2. (Currently Amended): The apparatus of Claim 1, wherein the performing logic further comprises:

fetch logic, wherein the fetch logic retrieves the plurality of commands from the command pipeline to provide a plurality of fetched command;

decode logic, wherein the decode logic decodes the plurality of fetched command to provide a plurality of decoded commands;

issue logic, wherein the issue logic issues the plurality of decoded commands to the command queue of the performance logic; and

execution logic to execute the plurality of decoded command in the command queue.

3. (Canceled)

4. (Canceled)

5. (Previously Presented): The apparatus of Claim 1 wherein the stall logic further comprises:

a tracking pipeline, wherein the tracking pipeline monitors progress of the plurality of commands and stall requests;

an incrementer, wherein the incrementer increments the unknown counter responsive to a stall being issued; and

a decrementer, wherein the decrementer decrements the unknown counter responsive to a stall being completed.

6-11. (Canceled)

12. (Currently Amended): A method of stalling performance of commands in a command performance system, comprising:

executing a plurality of commands;

reporting command progress of the plurality of commands to stall logic during execution;

determining if the performance misses during execution;

if the performance misses, storing the command in a command queue;

determining a known count of a number of commands in a command pipeline and in a command queue;

determining an unknown count prediction of future commands that can be directed toward the command queue and are past a point where the future commands can be stalled;

determining a sum of the known count and the unknown count;

determining if the sum is greater than a predefined number of slots in the command queue; and

if the sum is greater than a predefined number of slots in the command queue, stalling the command performance based on misses and progress of the plurality of commands.

13. (Original): The method of Claim 12, where the step of stalling the command performance further comprises receiving a completion signal when stored commands are performed.

14-19. (Canceled)

20. (Previously Presented): The method of Claim 12, further comprising:
incrementing the unknown counter responsive to a stall being issued.

21. (Previously Presented): The method of Claim 12, further comprising:
decrementing the unknown counter responsive to a stall being completed.

22. (Currently Amended): An apparatus for stalling performance of commands in a command performance system, comprising:
means for executing a plurality of commands;
means for reporting command progress of the plurality of commands to stall logic during execution;
means for determining if the performance misses during execution;
means for storing the command in a command queue if the performance misses;
means for determining a known count of a number of commands in a command pipeline and in a command queue;
means for determining an unknown count prediction of future commands that can be directed toward the command queue and are past a point where the future commands can be stalled;
means for determining a sum of the known count and the unknown count;
means for determining if the sum is greater than a predefined number of slots in the command queue; and
means for stalling the command performance based on misses and progress of the plurality of commands if the sum is greater than a predefined number of slots in the command queue.

23. (Previously Presented): The apparatus of Claim 22, wherein the means for stalling further comprises:

means for monitoring progress of the plurality of commands and stall requests;

means for incrementing the unknown counter responsive to a stall being issued;

and

means for decrementing the unknown counter responsive to a stall being completed.

24. (Previously Presented): The apparatus of Claim 22, where the means for stalling the command performance further comprises means for receiving a completion signal when stored commands are performed.

25. (Previously Presented): The apparatus of Claim 22, further comprising:

means for incrementing the unknown counter responsive to a stall being issued.

26. (Previously Presented): The apparatus of Claim 22, further comprising:

means for decrementing the unknown counter responsive to a stall being completed.